

REMARKS

Applicants hereby confirm the provisional election to prosecute the invention of Group 1, Claims 1-16, which was provisionally made with traverse on May 10, 2005. The listing of claims enclosed herewith indicates that Claims 17-20 are withdrawn from further consideration by the Examiner. The Examiner has stated that the inventions of Group I and II are related as a process of making and product made thereby. Further, Examiner has indicated that the inventions are distinct because the product as claimed can be made by another and materially different process (MPEP §806.05(f)). Examiner has stated that this is the case because the step of mechanically deforming the lower axial end such that an inner surface of the blind hole circumferentially contacts an outer surface of the mechanical interlock feature can be substituted for a step of chemically deforming the lower axial end in a similar manner. However, Examiner has provided no scientific or engineering basis for this conclusion, nor any example of how such a chemical deformation process would be performed. Therefore, Examiner has not made a sufficient showing that the inventions of Group I and Group II are distinct in the manner set forth in MPEP §806.05(f). Therefore, the restriction requirement is improper. For the reasons set forth, the restriction requirement is traversed and Applicants respectfully request that it be withdrawn.

Claims 1-5, 8, 9, and 14-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Oshima '193 (US 5,347,193). Examiner has asserted that Oshima '193 teaches a mechanical interlock feature which is located at least partially within the blind hole with the lower axial end engaging the interlock feature such that an inner surface of the blind hole circumferentially contacts an outer surface of the mechanical interlock feature. However, Examiner has not provided any indication by reference either to an element of Figure 2 or the teachings of the specification of

Oshima '193 which indicates what the mechanical interlock feature is. According to the teaching of paragraph 20 of the subject patent application:

The mechanical interlock feature 60 is an exterior surface feature of the precious metal insert that, in conjunction with the inner surface of hollow cylindrical section 50, creates a mechanical attachment between center electrode 40 and the precious metal insert 42, thereby forming center electrode assembly 34.

As stated above, Examiner has not provided any reference in the teaching, including the drawings, of Oshima '193 which describes a mechanical interlock feature as described above. Examiner has not identified a feature on the exterior surface of tip 5 of Oshima '193 which provides the mechanical interlock feature of Applicants invention. Further, Examiner has not provided any reference to the teaching of Oshima '193 which describes a mechanical attachment between a precious metal insert and the lower axial end of the center electrode created by deformation or other adaptation of the lower axial end of the center electrode as described in Applicants invention. Still further, Examiner has asserted that Oshima '193 teaches a peripheral weld with the weld including at least one interruption that permits trapped gases to escape from the blind hole. However, Oshima '193 has no such teaching. To the contrary, at column 6, lines 40-42, it is taught that, "The tip 5 is bonded to the inner surface 43A of the recess 43 all through their circumference (emphasis added) by means of laser or electron beam welding." Also, at column 4, lines 12-15, it is clearly indicated that the welding portion 5A prevents an entry of the combustion gas against the heat-conductor core 42 which protects the core 42 against corrosion and erosion due to oxidation." such that the welding portion clearly would not permit trapped gases to escape from the blind hole since the weld is impervious to the entrance of gases. Therefore, since Examiner has not demonstrated that Oshima '193 teaches the elements described above and set forth in independent claims 1 and 14, the rejection of these claims under 35 U.S.C. § 102(b) is improper. Further, the rejections of dependent

claims 2-5, 8, 9, 15 and 16 based on their dependency from either claim 1 or 14 is also improper.

For the reasons stated, the rejection of claims 1-5, 8, 9 and 14-16 in view of Oshima '193 is traversed and Applicants respectfully request that this rejection be withdrawn.

Claims 1 and 6-9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Oshima '474 (US 5,273,474). Examiner has asserted that Oshima '474 teaches a mechanical interlock feature which is located at least partially within the blind hole with the lower axial end engaging the interlock feature such that an inner surface of the blind hole circumferentially contacts an outer surface of the mechanical interlock feature. However, Examiner has not provided any indication by reference either to an element or feature of Figure 11 or the teachings of the specification of Oshima '474 which indicates what the mechanical interlock feature is. Again, according to the teaching of paragraph 20 of the subject patent application:

The mechanical interlock feature 60 is an exterior surface feature of the precious metal insert that, in conjunction with the inner surface of hollow cylindrical section 50, creates a mechanical attachment between center electrode 40 and the precious metal insert 42, thereby forming center electrode assembly 34.

As stated above, Examiner has not provided any reference in the teaching, including the drawings, of Oshima '474 which describes a mechanical interlock feature as described above. Examiner has not identified a feature on the exterior surface of tip 3a of Oshima '474 which provides the mechanical interlock feature of Applicants invention. Further, Examiner has not provided any reference to the teaching of Oshima '474 which describes a mechanical attachment between a precious metal insert and the lower axial end of the center electrode created by deformation or other adaptation of the lower axial end of the center electrode as described in Applicants invention. Therefore, since Examiner has not demonstrated that Oshima '474 teaches the elements described above and set forth in independent claim 1, the rejection of this claim under 35 U.S.C. § 102(b) is improper. Further,

the rejections of dependent claims 6-9 based on their dependency from claim 1 is also improper. For the reasons stated, the rejection of claims 1 and 6-9 in view of Oshima '474 is traversed and Applicants respectfully request that this rejection be withdrawn.

New claims 22-30 have been added. Applicants believe that the rationale set forth above with regard to claims 1-10 also applies to claims 22-30 with regard to both Oshima '193 and Oshima '474.

Examiners objection to claim 10 is also improper because of the improper rejection of claim 1 from which it depends for the reasons set forth above regarding the rejection of claim 1. Therefore the objection to claim 10 is traversed and Applicants respectfully request that the objection to claim 10 be withdrawn.

Examiner's allowance of claims 11 and 13 is gratefully acknowledged. The careful consideration and allowance of these claims is appreciated.

Reconsideration of this application as amended is respectfully requested.


It is believed that this application now is in condition for allowance. Further and favorable action is requested.

The Patent Office is authorized to charge or refund any fee deficiency or excess to Deposit Account No. 06-0420.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS, P.C.

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Date


Edmund P. Anderson, Registration No. 34,764
The Pinehurst Office Center, Suite #101
39400 Woodward Avenue
Bloomfield Hills, Michigan 48304-5151
(248) 723-0370